

In the Claims

1. (Currently Amended) A method for managing fulfillment data associated with a fulfillment system using a fulfillment engine that is stored and executed using local data storage within a database management system, the fulfillment engine providing a first interface for communicating fulfillment data with one or more remote application-specific systems stored and executed using remote data storage external to the database management system supporting the fulfillment engine, each remote application-specific system associated with a corresponding fulfillment type, the fulfillment engine providing a second interface for communicating fulfillment data with the fulfillment system, the method comprising performing the following operations in establishing a plurality of fulfillment interfaces for a plurality of fulfillment types, each fulfillment type having a corresponding fulfillment interface that is accessible by a user to access or modify a plurality of target data using the fulfillment data:

generating within the local data storage a single local parent multi-definition table appropriate for the plurality of fulfillment types;

for each fulfillment type, generating a name and definition for a local parent view of the single local parent multi-definition table;

for each fulfillment type, mapping the definition for the local parent view to the single local parent multi-definition table to generate the local parent view within the local data storage, the local parent view comprising a view of the single local parent multi-definition table operable to access only fulfillment data that has been stored in the single local parent multi-definition table using the local parent view; and

for each fulfillment type, using the name and mapped definition for the local parent view to generate within the remote data storage a remote actual child view of a corresponding remote actual child multi-definition table and a remote staged child view of a corresponding remote staged child multi-definition table, each remote child view comprising a copy of the local parent view, each remote actual child view operable to access only fulfillment data that has been stored in the corresponding remote actual child multi-definition table using the remote actual child view.

2. (Original) The method of Claim 1, wherein the fulfillment system comprises a back office accounting system comprising data associated with a plurality of credit card accounts and fulfillment data is stored in the fulfillment system to modify data associated with one or more of the credit card accounts.

3. (Original) The method of Claim 1, wherein a view comprises a view of an ORACLE table.

4. (Original) The method of Claim 1, further comprising performing the following operations in storing fulfillment data in the fulfillment system according to the plurality of fulfillment types using the plurality of corresponding established fulfillment interfaces:

for each fulfillment type, copying all fulfillment data within the corresponding remote actual child multi-definition table to the corresponding remote staged child multi-definition table at a particular time, all of this fulfillment data for a fulfillment type being copied substantially simultaneously at the particular time such that the corresponding remote staged child multi-definition table reflects the corresponding remote actual child multi-definition table as of the particular time;

for each remote staged child view, reading the copied fulfillment data from the corresponding remote staged multi-definition table and writing this copied fulfillment data to the single local parent multi-definition table through the corresponding local parent view; and

for each fulfillment type, in preparation for additional fulfillment data to be stored in the fulfillment system in a subsequent storing operation, deleting from the corresponding remote actual child multi-definition table all the fulfillment data that was copied to the corresponding remote staged child multi-definition table and deleting from the corresponding remote staged child multi-definition table all the fulfillment data that was copied from the corresponding remote actual child multi-definition table.

5. (Original) The method of Claim 4, further comprising:

for each fulfillment type, using the name and mapped definition for the local parent view to generate a remote historical child view of a corresponding remote historical child multi-definition table; and

for each remote child view, copying all fulfillment data within the corresponding remote staged child multi-definition table to the corresponding remote historical child multi-definition table for archival purposes, the fulfillment data within the remote historical child multi-definition tables being available for use in deriving historical fulfillment information.

6. (Original) The method of Claim 4, wherein the local parent view for each fulfillment type writes data to and reads data from the single local multi-definition table.

7. (Original) The method of Claim 4, wherein the additional fulfillment data may be written to each remote actual child multi-definition table without interruption while the fulfillment data that was copied from the remote actual child multi-definition table is being stored in the fulfillment system, the additional fulfillment data written to the remote actual multi-definition table after this copied fulfillment data has been copied being stored in the fulfillment system in the subsequent storing operation.

8. (Original) The method of Claim 4, wherein the stored fulfillment data is committed within the fulfillment system only if writing of the copied fulfillment data to the single local parent multi-definition table is successful as to all the local parent views in order to help prevent inconsistencies due to partial fulfillments.

9. (Original) The method of Claim 4, wherein the storing of fulfillment data in the fulfillment system occurs daily.

10. (Original) The method of Claim 1, wherein the remote child views for a fulfillment type provide a simulated fulfillment interface at a remote application-specific system simulating the fulfillment interface associated with the corresponding local parent view at the database management system.

11. (Original) The method of Claim 1, wherein generation and use of the remote child views is transparent to the remote application-specific systems and does not require modification of the remote application-specific systems to support a new fulfillment interface for a new fulfillment type.

12. (Currently Amended) A system for managing fulfillment data associated with a fulfillment system:

a fulfillment engine stored and executed using local data storage within a database management system;

a first interface for communicating fulfillment data with one or more remote application-specific systems stored and executed using remote data storage external to the database management system supporting the fulfillment engine, each remote application-specific system associated with a corresponding fulfillment type; and

a second interface for communicating fulfillment data with the fulfillment system;

the fulfillment engine operable to performing the following operations in establishing a plurality of fulfillment interfaces for a plurality of fulfillment types, each fulfillment type having a corresponding fulfillment interface that is accessible by a user to access or modify a plurality of target data using the fulfillment data:

generating within the local data storage a single local parent multi-definition table appropriate for the plurality of fulfillment types;

for each fulfillment type, generating a name and definition for a local parent view of the single local parent multi-definition table;

for each fulfillment type, mapping the definition for the local parent view to the single local parent multi-definition table to generate the local parent view within the local data storage, the local parent view comprising a view of the single local parent multi-definition table operable to access only fulfillment data that has been stored in the single local parent multi-definition table using the local parent view; and

for each fulfillment type, using the name and mapped definition for the local parent view to generate within the remote data storage a remote actual child view of a corresponding remote actual child multi-definition table and a remote staged child view of a corresponding remote staged child multi-definition table, each remote child view comprising a copy of the local parent view, each remote actual child view operable to access only fulfillment data that has been stored in the corresponding remote actual child multi-definition table using the remote actual child view.

13. (Original) The system of Claim 12, wherein the fulfillment system comprises a back office accounting system comprising data associated with a plurality of credit card accounts and fulfillment data is stored in the fulfillment system to modify data associated with one or more of the credit card accounts.

14. (Original) The system of Claim 12, wherein a view comprises a view of an ORACLE table.

15. (Original) The system of Claim 12, the fulfillment engine further operable to facilitate storage of fulfillment data in the fulfillment system according to the plurality of fulfillment types using the plurality of corresponding established fulfillment interfaces, storage of fulfillment data comprising:

for each fulfillment type, copying all fulfillment data within the corresponding remote actual child multi-definition table to the corresponding remote staged child multi-definition table at a particular time, all of this fulfillment data for a fulfillment type being copied substantially simultaneously at the particular time such that the corresponding remote staged child multi-definition table reflects the corresponding remote actual child multi-definition table as of the particular time;

for each remote staged child view, reading the copied fulfillment data from the corresponding remote staged multi-definition table and writing this copied fulfillment data to the single local parent multi-definition table through the corresponding local parent view; and

for each fulfillment type, in preparation for additional fulfillment data to be stored in the fulfillment system in a subsequent storing operation, deleting from the corresponding remote actual child multi-definition table all the fulfillment data that was copied to the corresponding remote staged child multi-definition table and deleting from the corresponding remote staged child multi-definition table all the fulfillment data that was copied from the corresponding remote actual child multi-definition table.

16. (Original) The system of Claim 15, wherein:

the fulfillment engine is further operable to, for each fulfillment type, using the name and mapped definition for the local parent view to generate a remote historical child view of a corresponding remote historical child multi-definition table; and

storage of fulfillment data further comprises, for each remote child view, copying all fulfillment data within the corresponding remote staged child multi-definition table to the corresponding remote historical child multi-definition table for archival purposes, the fulfillment data within the remote historical child multi-definition tables being available for use in deriving historical fulfillment information.

17. (Original) The system of Claim 15, wherein the local parent view for each fulfillment type writes data to and reads data from the single local multi-definition table.

18. (Original) The system of Claim 15, wherein the additional fulfillment data may be written to each remote actual child multi-definition table without interruption while the fulfillment data that was copied from the remote actual child multi-definition table is being stored in the fulfillment system, the additional fulfillment data written to the remote actual multi-definition table after this copied fulfillment data has been copied being stored in the fulfillment system in the subsequent storing operation.

19. (Original) The system of Claim 15, wherein the stored fulfillment data is committed within the fulfillment system only if writing of the copied fulfillment data to the single local parent multi-definition table is successful as to all the local parent views in order to help prevent inconsistencies due to partial fulfillments.

20. (Original) The system of Claim 15, wherein the storing of fulfillment data in the fulfillment system occurs daily.

21. (Original) The system of Claim 12, wherein the remote child views for a fulfillment type provide a simulated fulfillment interface at a remote application-specific system simulating the fulfillment interface associated with the corresponding local parent view at the database management system.

22. (Original) The system of Claim 12, wherein generation and use of the remote child views is transparent to the remote application-specific systems and does not require modification of the remote application-specific systems to support a new fulfillment interface for a new fulfillment type.

23. (Currently Amended) Software for managing fulfillment data associated with a fulfillment system, the software stored and executed using local data storage within a database management system, the software providing a first interface for communicating fulfillment data with one or more remote application-specific systems stored and executed using remote data storage external to the database management system supporting the software, each remote application-specific system associated with a corresponding fulfillment type, the software providing a second interface for communicating fulfillment data with the fulfillment system, the software operable when executed to perform the following operations in establishing a plurality of fulfillment interfaces for a plurality of fulfillment types, each fulfillment type having a corresponding fulfillment interface that is accessible by a user to access or modify a plurality of target data using the fulfillment data:

generate within the local data storage a single local parent multi-definition table appropriate for the plurality of fulfillment types;

for each fulfillment type, generate a name and definition for a local parent view of the single local parent multi-definition table;

for each fulfillment type, map the definition for the local parent view to the single local parent multi-definition table to generate the local parent view within the local data storage, the local parent view comprising a view of the single local parent multi-definition table operable to access only fulfillment data that has been stored in the single local parent multi-definition table using the local parent view; and

for each fulfillment type, use the name and mapped definition for the local parent view to generate within the remote data storage a remote actual child view of a corresponding remote actual child multi-definition table and a remote staged child view of a corresponding remote staged child multi-definition table, each remote child view comprising a copy of the local parent view, each remote actual child view operable to access only fulfillment data that has been stored in the corresponding remote actual child multi-definition table using the remote actual child view.

24. (Original) The software of Claim 23, wherein the fulfillment system comprises a back office accounting system comprising data associated with a plurality of credit card accounts and fulfillment data is stored in the fulfillment system to modify data associated with one or more of the credit card accounts.

25. (Original) The software of Claim 23, wherein a view comprises a view of an ORACLE table.

26. (Original) The software of Claim 23, further operable to facilitate storage of fulfillment data in the fulfillment system according to the plurality of fulfillment types using the plurality of corresponding established fulfillment interfaces, storage of fulfillment data comprising:

for each fulfillment type, copying all fulfillment data within the corresponding remote actual child multi-definition table to the corresponding remote staged child multi-definition table at a particular time, all of this fulfillment data for a fulfillment type being copied substantially simultaneously at the particular time such that the corresponding remote staged child multi-definition table reflects the corresponding remote actual child multi-definition table as of the particular time;

for each remote staged child view, reading the copied fulfillment data from the corresponding remote staged multi-definition table and writing this copied fulfillment data to the single local parent multi-definition table through the corresponding local parent view; and

for each fulfillment type, in preparation for additional fulfillment data to be stored in the fulfillment system in a subsequent storing operation, deleting from the corresponding remote actual child multi-definition table all the fulfillment data that was copied to the corresponding remote staged child multi-definition table and deleting from the corresponding remote staged child multi-definition table all the fulfillment data that was copied from the corresponding remote actual child multi-definition table.

27. (Original) The software of Claim 26, further operable to:

for each fulfillment type, use the name and mapped definition for the local parent view to generate a remote historical child view of a corresponding remote historical child multi-definition table; and

for each remote child view, facilitate copying of all fulfillment data within the corresponding remote staged child multi-definition table to the corresponding remote historical child multi-definition table for archival purposes, the fulfillment data within the remote historical child multi-definition tables being available for use in deriving historical fulfillment information.

28. (Original) The software of Claim 26, wherein the local parent view for each fulfillment type writes data to and reads data from the single local multi-definition table.

29. (Original) The software of Claim 26, wherein the additional fulfillment data may be written to each remote actual child multi-definition table without interruption while the fulfillment data that was copied from the remote actual child multi-definition table is being stored in the fulfillment system, the additional fulfillment data written to the remote actual multi-definition table after this copied fulfillment data has been copied being stored in the fulfillment system in the subsequent storing operation.

30. (Original) The software of Claim 26, wherein the stored fulfillment data is committed within the fulfillment system only if writing of the copied fulfillment data to the single local parent multi-definition table is successful as to all the local parent views in order to help prevent inconsistencies due to partial fulfillments.

31. (Original) The software of Claim 26, wherein the storing of fulfillment data in the fulfillment system occurs daily.

32. (Original) The software of Claim 23, wherein the remote child views for a fulfillment type provide a simulated fulfillment interface at a remote application-specific system simulating the fulfillment interface associated with the corresponding local parent view at the database management system.

33. (Original) The software of Claim 23, wherein generation and use of the remote child views is transparent to the remote application-specific systems and does not require modification of the remote application-specific systems to support a new fulfillment interface for a new fulfillment type.

34. (Currently Amended) A method for managing fulfillment data associated with a fulfillment system using a fulfillment engine that is stored and executed using local data storage within a database management system, the fulfillment system comprising a back office accounting system comprising data associated with a plurality of credit card accounts the fulfillment engine providing a first interface for communicating fulfillment data with one or more remote application-specific systems stored and executed using remote data storage external to the database management system supporting the fulfillment engine, each remote application-specific system associated with a corresponding fulfillment type, the fulfillment engine providing a second interface for communicating fulfillment data with the fulfillment system to modify data associated with one or more of the credit card accounts, the method comprising:

performing the following operations in establishing a plurality of fulfillment interfaces for a plurality of fulfillment types, each fulfillment type having a corresponding fulfillment interface that is accessible by a user to access or modify a plurality of target data using the fulfillment data:

generating within the local data storage a single local parent multi-definition table appropriate for the plurality of fulfillment types;

for each fulfillment type, generating a name and definition for a local parent view of the single local parent multi-definition table;

for each fulfillment type, mapping the definition for the local parent view to the single local parent multi-definition table to generate the local parent view within the local data storage, the local parent view comprising a view of the single local parent multi-definition table operable to access only fulfillment data that has been stored in the single local parent multi-definition table using the local parent view; and

for each fulfillment type, using the name and mapped definition for the local parent view to generate within the remote data storage remote actual, staged, and historical child views of corresponding remote actual, staged, and historical child multi-definition tables, respectively, each remote child view comprising a copy of the local parent view, each remote actual child view operable to access only fulfillment data that has been stored in the corresponding remote actual child multi-definition table using the remote actual child view;

the remote child views for a fulfillment type provide a simulated fulfillment interface at a remote application-specific system simulating the fulfillment interface associated with the corresponding local parent view at the database management system; and

performing the following operations in storing fulfillment data in the fulfillment system according to the plurality of fulfillment types using the plurality of corresponding established fulfillment interfaces:

for each fulfillment type, copying all fulfillment data within the corresponding remote actual child multi-definition table to the corresponding remote staged child multi-definition table at a particular time, all of this fulfillment data for a fulfillment type being copied substantially simultaneously at the particular time such that the corresponding remote staged child multi-definition table reflects the corresponding remote actual child multi-definition table as of the particular time;

for each remote child view, reading the copied fulfillment data from the corresponding remote staged multi-definition table and writing this copied fulfillment data to the single local parent multi-definition table through the corresponding local parent view, the local parent view for each fulfillment type writing data to and reading data from the single local multi-definition table;

for each remote child view, copying all fulfillment data within the corresponding remote staged child multi-definition table to the corresponding remote historical child multi-definition table for archival purposes, the fulfillment data within the remote historical child multi-definition tables being available for use in deriving historical fulfillment information; and

for each fulfillment type, in preparation for additional fulfillment data to be stored in the fulfillment system in a subsequent storing operation, deleting from the corresponding remote actual child multi-definition table all the fulfillment data that was copied to the corresponding remote staged child multi-definition table and deleting from the corresponding remote staged child multi-definition table all the fulfillment data that was copied from the corresponding remote actual child multi-definition table.